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CHAPTER SIX: WEIGHMAN

The position of the weighman is not nearly as prominent as when HMA plants were not computerized and certified by the Testing Department. Currently, a weighman is only required at the HMA plant site if the weigh scales are not computerized. A Contractors representative is responsible for recording the individual weight of the trucks when this occurs. If a weighman is not required at the HMA plant, the inspection procedures detailed herein are conducted at the paving operation.

HMA mixtures are paid for by the ton. If a weighman is required, their responsibility is to ensure that the correct weight of each truckload of mix is determined and recorded.

HMA mixtures are weighed on approved truck scales furnished by the Contractor or on public scales at the expense of the Contractor. The automatic printing systems may be used with the scale systems of automatic batching type plants instead of truck scales. This setup is required to be certified by the District Testing Department.

The duties of the weighman include:

1) Inspecting hauling trucks for compliance with Specifications and the Quality Control Plan (QCP)

2) Establishing the tare weights of the trucks twice each day (if computerized scales are not used)

3) Observing the weighing operation to ensure accurate measurements

4) Checking and signing the weigh tickets

5) Completing the Weighman's Daily Report, IC-683

INSPECTION OF HAULING TRUCKS

The weighman is responsible for checking the haul units for compliance with Specifications. The Contractor's plan for ensuring proper transportation and handling of the HMA is required to be addressed in the QCP. The HMA technician should be familiar with the QCP before paving operations begin and a copy of the QCP should be kept near the paving operation at all times for reference. Checks to be made include:

1) Truck beds are required to be tight, smooth, and clean

2) Trucks are required to be equipped with a watertight cover to protect the mixture from rain, dust, snow, or any other foreign material

3) Loads should be covered by tarps under the following conditions:

   a. The air temperature is 65°F or lower

   b. There is a possibility of rain

   c. Dust or other foreign matter may collect in the mixture

   d. Mix temperature requirements are marginal at the paver or if crusting occurs on the load

   e. If the material is a surface mixture. These mixtures should always be tarped unless the mixing and paving operations are so close to each other that the mix temperature measured at the surface of the load is within the specified temperature range.

   f. The QCP indicates the truck is required to be covered

   g. Other adverse conditions exist

4) A minimum amount of an approved anti-adhesive agent may be used in the truck beds to prevent the mix from sticking. A list of approved anti-adhesive agents may be obtained from the Materials and Tests Division. The truck bed is required to be in the raised position if a non-foaming anti-adhesive is applied and remain raised until the excess anti-adhesive has drained from the bed.

5) All trucks are required to have an easily identified number

6) Trucks should have no hydraulic or fuel leaks, as this material may damage the pavement

WEIGHING OPERATION

Before a scale may be used, a seal is required on the scale indicating that the Bureau of Weights and Measures has checked the scale within the last year. Scales not sealed or having seals dated one year or older are not allowed to be used.

The balance of the scale is required to be checked twice each day. When the platform is clean, the scale should read zero. If the scale doesn't balance, the scale should not be used.

The Specifications require the Contractor to furnish an employee to perform the actual weighing of the trucks and writing of tickets. The INDOT weighman should observe the weighing operation very closely to ensure that the mix is weighed peroperly. Once again, these conditions are only required if the HMA plant is not a computerized and certified plant.

When batch weights are used for HMA mixtures made with asphalt emulsions, the weight of the asphalt emulsion in the batches is required to be reduced by 30 percent to correct for the weight of the water in the emulsion.

The plant scale system may include an approved automatic printer system that prints the individual or accumulative weights of the materials in each batch, provided the printer system is used in conjunction with approved automatic batching and mixing control equipment and software. The printout of the weight of each batch and the total weight of all batches in a load are required to be on one ticket. This is considered the weigh ticket for the load. If this system is used, random loads may be selected to be weighed on commercial scales as frequently as directed. However, on contracts of 5000 tons or more, a load selected at random is required to be checked during the first day of production and as frequently thereafter as directed. The gross weight of the check load, tare weight of the truck over

the same scale, and the net weight of the mixture are required to be recorded on the weigh ticket attached to the printout ticket and retained in the file of the PE/PS. The net weight of mixture in the check load is required to not vary from the total weight of mixture recorded on the printout ticket by more than 200 pounds for loads up to 10 tons, 300 pounds for loads from 10 to15 tons, or 400 pounds for loads over 15 tons. The automatic system is used by nearly all Contractors now and the use of a non-computerized weigh system has become the exception rather than the norm.

WEIGH TICKETS

The weigh tickets furnished by the Contractor are required to have the following information:

1) Ticket serial number

2) Date

3) Contract number

4) Source of supply

5) Material designation (size and type)

6) DMF or JMF number

7) Truck number

8) Time weighed

9) Gross weight

10) Tare weight

11) Net weight

12) Two spaces for signatures

The space on the weigh ticket for moisture content is not used for hot mix asphalt.

The INDOT weighman is required to check the information and sign the ticket. The ticket is given to the truck driver to deliver to the HMA technician when the load is delivered to the paving site. The HMA technician signs the white copy (original). Full signatures are required for both the weighman and the HMA technician. Once again, if a computerized system is used, the technician at the paving operation

accepts the ticket and verifies that all information is on the ticket and is correct.

WEIGHMAN'S DAILY REPORT -- FORM IC 683

The weighman's report (Form IC 683) is required to be completed daily. The tare weights for each truck are recorded twice each day.

Separate forms are required to be completed when the plant is supplying more than one contract. Only one form is required for each contract if more than one type of material is furnished.

TRUCK LOAD LIMITS

It is a violation of State law and Section **105.12** to haul overweight loads on any public road. The INDOT weighman is responsible to ensure that overweight trucks are not sent to the contract. The weigh ticket should not be signed until the truck complies with the legal load limits. If there is a problem, the PE/PS should be contacted.

The Indiana Weight Limitation Law provides that:

1) The total gross weight not exceed the following weights:

Tri-Axle	68,000 pounds
Quad-Axle	73,280 pounds
Tractor Trailer	80,000 pounds

2) The total weight from any tandem axle group not exceed 17,000 pounds per axle

3) An axle weight not exceed 20,000 pounds

4) The maximum wheel weight not exceed 800 pounds per inch width of tire as measured between the flanges of the rim

The local Indiana State Police Post should be contacted if load limit infractions become a problem on the contract.